

The opinion in support of the decision^{*} being entered today was not written for publication and is not binding precedent of the Board.

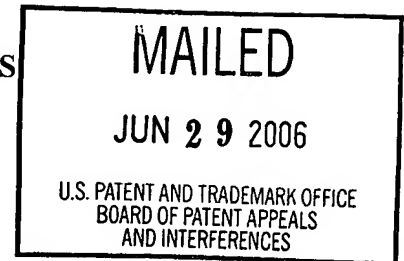
UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ANDREAS MANZ
and
NILS GOEDECKE

Appeal No. 2005-2077
Application No. 10/046,564

ON BRIEF



Before GARRIS, KRATZ, and JEFFREY T. SMITH, Administrative Patent Judges.

JEFFREY T. SMITH, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the Examiner's final rejection of claims 1 and 3 to 20, all of the pending claims. We have jurisdiction under 35 U.S.C. § 134.

BACKGROUND

The present invention relates to a micro-fabricated chromatographic system including an apparatus for transporting fluid through a fluid inlet, a separation channel and through a fluid outlet in order to implement a chromatographic analysis of the fluid. (Brief, page 3).

Representative claim 1, as presented in the appendix to the Brief, appears below:

1. A micro-fabricated chromatographic system, said system comprising:

a transport channel including at least one fluid inlet and a separation channel; and

an evaporator including at least one evaporator channel arranged to receive fluid, each evaporator channel having at least one open fluid outlet operable to evaporate fluid at the at least one fluid outlet so as to cause the flow of fluid through the transport channel.

The Examiner cited the following references in rejecting the appealed claims:

| | | |
|------------------------------|-----------------|---------------|
| Overton | US 6,068,684 | May 30, 2000 |
| Sutton et al. (Sutton) | US 6,103,112 | Aug. 15, 2000 |
| Zare et al. (Zare) | US 6,136,187 | Oct. 24, 2000 |
| Hatch | US 6,238,565 | May 29, 2001 |
| Henderson et al. (Henderson) | US 6,258,263 | July 10, 2001 |
| Miyazaki (EPA) | EP 0 568 024 A2 | Nov. 3, 1993 |

The Examiner entered the following rejections (Answer, pages 3-6):

Claims 1, 5, and 7-19 stand rejected under 35 U.S.C. § 103(a) as obvious over Henderson in view of Miyazaki.

Claims 3 and 4 stand rejected under 35 U.S.C. § 103(a) over Henderson in view of Miyazaki and further in view of Zare.

Claim 6 stands rejected under 35 U.S.C. § 103(a) as obvious over Henderson in view of Miyazaki and further in view of Sutton or Overton.

Claim 20 stands rejected under 35 U.S.C. § 103(a) as obvious over Henderson in view of Miyazaki and further in view of Hatch.

Rather than reiterate the conflicting viewpoints advanced by the Examiner and the Appellants regarding the above-noted rejections, we make reference to the Answer (mailed October 19, 2004) for the Examiner's reasoning in support of the rejections, and to the Brief (filed September 2, 2004) for Appellants' arguments thereagainst. We affirm the Examiner's § 103 rejections. Our reasons follow.

OPINION

Claims 1, 5, and 7 to 19 stand rejected under 35 U.S.C. § 103(a) as obvious over Henderson in view of Miyazaki. We select claim 1 as representative of the rejected claims.

The Examiner asserts Henderson describes a micro-fabricated chromatographic system that differs from the claimed invention in the presence of a particular micro pump. (Answer, page 3). The Examiner relies upon the Miyazaki reference for teaching a suitable micro pump. The Examiner determined (Answer, page 4) that the micro pump of Miyazaki operates through an evaporation operating mechanism. Miyazaki discloses, columns 3 and 4, various methods for evaporating a liquid to operate the pump. The Examiner also determined that the micro pump of Miyazaki has the advantage of being compact and does not pulsate the flow. (Answer, page 4). The Examiner concluded that it would have been obvious to a person of ordinary skill in the art to employ a known micro pump, such as disclosed by Miyazaki, in the system of Henderson. We agree.

Appellants argue (Brief, page 6) that Henderson does not recognize the advantages that are achieved by including an internal pumping system. This argument is not persuasive. The invention of Henderson recognizes the need to transport liquid test samples through the apparatus. (column 8, lines 35-45).

Appellants argue that the Miyazaki does not disclose the use of fluid evaporation to cause the flow through a transfer channel. (Brief, pages 7 and 9). Appellants' argument is not persuasive. Miyazaki discloses (columns 3 and 4) evaporation propelled fluid transport system and techniques. This system includes flowing a liquid through a flow path (1) that is equivalent to the argued transport channel.

Appellants argue the cited references fail to teach the claimed structure for causing the flow of fluid through a transport channel by means of an evaporator. (Brief, pages 11-12). Appellants also argue that even if the references were combined they fail to teach the subject matter of claim 1. (Brief, page 12).

Appellants' arguments are not persuasive. The systems of both Miyazaki and Henderson describe the transporting of fluid from an inlet system through a transport channel and to an outlet port. While Henderson discloses the use of a pump, Miyazaki describes a pumping mechanism that relies on the gasifying (evaporating) the liquid for transport through the system. A person of ordinary skill in the art would have reasonably expected that the pumping mechanism described by Miyazaki would also have been suitable for transporting a liquid through the system of Henderson. "For obviousness under

§ 103, all that is required is a reasonable expectation of success.” In re O’Farrell, 853 F.2d 894, 904, 7 USPQ2d 1673, 1681 (Fed. Cir. 1988).

Appellants argue that the Examiner has failed to provide any reason of motivation for combining the Henderson and Miyazaki references. (Brief, pages 13-14).

Appellants’ arguments are not persuasive. Both the Henderson and Miyazaki references describe systems that rely on the transportation (pumping) of fluid through the apparatus. The Miyazaki reference is described as an improvement on micro pump technology. (Note columns 1 and 2). Thus, a person of ordinary skill in the art would have been motivated to utilize the pumping mechanism described by Miyazaki and the apparatus of Henderson in order to obtain the advantages stated by the Examiner and expressed in the Miyazaki reference.

Appellants argue that the Henderson and Miyazaki references teach away from any combination. (Brief, pages 14 and 5). This argument is not persuasive for the reasons expressed above.

Appellants’ arguments (Brief, page 10) regarding the rejection of claims 3, 4, 6 and 20 have been noted. For each of the stated rejections the Appellants state their understanding as to the Examiner’s basis of citing the additional prior art references. However, Appellants have not argued that the teachings of the cited references could not be utilized with the teaching of Henderson and Miyazaki as proposed by the Examiner. The Examiner has presented factual determinations regarding the suitability of adding the additional prior art references (see Answer, pages 4-5). These determinations are

reasonable. Since Appellants have failed to specifically challenge the Examiner's factual determinations, we presume that they are in agreement with the Examiner. Thus, for the reasons presented above regarding independent claim 1 and the reasons expressed by the Examiner we will uphold these rejections.

CONCLUSION

For the foregoing reasons and those set forth in the Answer, given due weight to Appellants' arguments, we determine that the preponderance of evidence weighs in favor of the Examiner's rejections. Accordingly, the Examiner's rejections under 35 U.S.C. § 103(a) are affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a)(iv)(effective Sept. 13, 2004).

AFFIRMED

Bradley R Harris

Bradley R. Garris
Administrative Patent Judge

Robt F. Kuhl

Peter F. Kratz
Administrative Patent Judge

Alfred E. Smith

Jeffrey T. Smith
Administrative Patent Judge

BOARD OF PATENT APPEALS AND INTERFERENCES

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